

**Curriculum Vitae**  
**ROGER A. RAJEWSKI**

**Employment Address**

Center for Drug Delivery Research  
Higuchi Biosciences Center  
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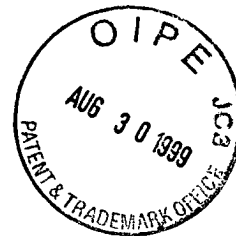
**Date of Birth** January 23, 1962

**Birthplace** Hays, Kansas

**Marital Status** Married, one child

**Education**

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| 1980-1984 | The University of Kansas, Lawrence, KS; Bachelor of Arts degrees awarded in Chemistry and Biochemistry, May 1984  |
| 1984-1987 | The University of Kansas, Lawrence, KS; Completion of course work, research skills training and comprehensive examination requirements for candidacy in the Pharmaceutical Chemistry Ph.D. program. Graduate advisor: Dr. V.J. Stella, M.S. degree awarded May 1987 |
| 1987-1990 | The University of Kansas, Lawrence, KS; Completion of Pharmaceutical Chemistry Ph.D. program. Graduate advisor: Dr. V.J. Stella, Ph.D. degree awarded May 1990  |

**Graduate Course Work Completed**

Pharmaceutical Analysis, Mechanisms of Drug Deterioration and Stabilization, Pharmaceutical Equilibria, Advanced Topics in Biopharmaceutics and Pharmacokinetics, Physical Organic Chemistry, Advanced Chemical Thermodynamics, Stereochemistry and Conformation, Principles of Organic Chemical Reactions, Advanced Chemical Kinetics, Radioisotope Handling and Safety

**Supplemental Education Completed**

"Histopathology of Neoplasia", presented by the National Cancer Institute, Keystone, CO; June 1986

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**Supplemental Education Completed continued**

"Technical Report Writing", presented by Ann Eisenberg; American Chemical Society Short Course, King of Prussia, PA; March 1990

"Strategies in Protein Characterization", a teleconference presented by Hewlett Packard, King of Prussia, PA; May 1990

"Basic Training Course in Drug Development", presented by the Pharmaceutical Manufacturing Association Education and Research Institute, Arlington, VA; June 1990

"Managing Accelerated Productivity", presented by the Insight Consulting Group, King of Prussia, PA; August 1990

"Bacteria-Retentive Filtration for the Pharmaceutical and Biologicals Industries", presented by Pall Ultrafine Filtration Company, King of Prussia, PA; September 1990

"Tom Peters' Excellence 1991 Seminar", presented by Greg Trulson; CareerTrack® Seminar Series; Overland Park, KS; Fall 1991

"Good Manufacturing Practices", presented by Bob Mason, The GMP Institute, Lawrence, KS; November 1992

"Developing Supervisory Skills", presented by Dr. Kelly Flynn, Grant Thornton, Lawrence, KS; Fall/Winter 1993-1994

"Virtual Corporation Tactics", presented by the Barnett International Learning Group, San Diego, CA; March 1996

"Drug Delivery Technologies", presented by Strategic Research Institute, Princeton, NJ; July 1998

**Research Positions**

1984-1990 Graduate Research Assistant, The Department of Pharmaceutical Chemistry, The University of Kansas, Lawrence, KS 66045

1994-present Assistant Research Professor, Center for Drug Delivery Research, Higuchi Biosciences Center, The University of Kansas, Lawrence, KS 66047

1995-present Courtesy Assistant Professor, The Department of Pharmaceutical Chemistry, The University of Kansas, Lawrence, KS 66047

**Development Positions**

1984 Research and Development Summer Intern, Sandoz Consumer Products, Lincoln, NE

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**Development Positions continued**

- 1990-1991 Associate Senior Investigator, Department of Pharmaceutical Research, SmithKline Beecham Pharmaceuticals, King of Prussia, PA 19406
- 1991-1992 Senior Scientist, Department of Analytical Pharmaceutical Chemistry, Oread Laboratories, Inc., Lawrence, KS 66047
- 1992-1994 Group Leader, Department of Analytical Pharmaceutical Chemistry, Oread Laboratories, Inc., Lawrence, KS 66047
- 1994-1997 Assistant Director, Center for Drug Delivery Research, Higuchi Biosciences Center, The University of Kansas, Lawrence, KS 66047
- 1997-present Associate Director, Center for Drug Delivery Research, Higuchi Biosciences Center, The University of Kansas, Lawrence, KS 66047

**Professional Affiliations**

- Alpha Chi Sigma, Chemistry Honor Society
- Phi Lambda Upsilon, Chemistry Honor Society
- American Association of Pharmaceutical Scientists

**Honors**

- NRSA Institutional Analytical Training Grant Trainee
- Kansas Health Foundation Fellow (formerly The Wesley Foundation of Kansas)
- Dorothy Haglund Graduate Dissertation Award Nominee
- Ph.D. degree awarded with honors
- 1995 Silicon Prairie Technology Association Biosciences Technology of the Year Award

**Post-Doctoral Scientists Supervised**

- S. Siam, Boehringer-Ingelheim, CN
- M. Cruaños, Merck, Westpoint, PA.
- E. Luna, Merck, Westpoint, PA.
- E. Bomancini, Therics, Princeton, NJ.
- K. Egodage, Monsanto, St. Louis, IL.
- Jon Snyder, USDA Research Labs, Fresno, CA
- Dave Bochniak, Boehringer-Ingelheim, CN

### Industrial Experience

As a Group Leader at Oread Laboratories (OLI), I was responsible for the direct supervision of three Senior Scientists ( 2 Ph.D.'s) and 11 bachelor level research technicians (\$460,000 annual payroll). The responsibilities of my group included:

1. analytical methods development and validation,
2. physical and chemical characterization of new chemical entities including assessment of solubility, stability and excipient interactions,
3. assessment of stability of parenteral drug products including compatibility in IV admixtures and delivery sets, and
4. formulation of lyophilized dosage forms.

These studies have been performed for regulatory submission (IND, NDA, ANDA) in the USA and European Community and have included both classic small molecules and biologicals.

As an Associate Senior Investigator at SmithKline Beecham, I was responsible for research in pharmaceutical product development and management including the scheduling of analytical methods development, release of ingredients and components, clinical manufacturing and formulation development. Additionally, my responsibilities included preparation of Product Reference Guides, preliminary in-process, release and product specifications, and stability protocols and data for IND filings. I was also involved in evaluation of external technologies for potential in-house licensing.

### Economic Development Experience

In the positions of Assistant Director and currently Associate Director for the Center for Drug Delivery Research (CDDR) at the Higuchi Biosciences Center I have been involved in Kansas Technology Enterprise Corporation supported development of University of Kansas technologies for potential commercialization in the private sector. In this capacity CDDR has supported the continued development and patent prosecution for the sulfobutyl ether cyclodextrin derivatives which have been licensed by the University to CyDex, Inc. of Overland Park, KS. CyDex is commercializing this technology under the trade name "Captisol" for use the formulation of GMP drug products. During my tenure at CDDR I helped guide the development of two additional technologies; drug processing with supercritical fluids and novel prodrug technologies. The supercritical fluids processing technologies have been licensed to Critech, Inc. and the prodrug technologies have been licensed to ProQuest Pharmaceuticals, Inc., both of Lawrence, KS. Both of these companies are in an early stage of development and the technologies they have licensed are continuing to be advanced within CDDR. In addition, CDDR has provided technological input for three Kansas companies not associated with the University.

### Patents

1. V. Stella and R. Rajewski; Derivatives of cyclodextrins exhibiting enhanced aqueous solubility and the use thereof, U.S. Patent 5,134,127; Patent applied for January 23, 1990; Patent granted July 28, 1992

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**Patents continued**

2. V. Stella and R. Rajewski; Derivatives of cyclodextrins exhibiting enhanced aqueous solubility and the use thereof, U.S. Patent 5,376,645; Patent applied for July 27, 1992; Patent granted December 27, 1994;
3. P. Kennedy, R. Rajewski and J. Baldoni; Crystalline amifostine compositions and methods for the preparation and use of same, U.S. Patent 5,424,471; Patent applied for July 29, 1993; Patent granted June 13, 1995
4. P. Kennedy, R. Rajewski and J. Baldoni; Crystalline amifostine compositions, U.S. Patent 5,591,731; Patent applied for February 16, 1995; Patent granted January 7, 1997
5. B. Subramaniam, S. Said, R. A. Rajewski and V. Stella; Methods and apparatus of particle micronization and nanonization by recrystallization from organic solutions sprayed into a compressed antisolvent, U.S. Patent 5,874,029; Patent applied for October 09, 1996, Patent granted February 23, 1999
6. B. Subramaniam, S. Said, R. A. Rajewski and V. Stella; Methods and apparatus for particle precipitation and coating using near-critical and supercritical antisolvents, U.S. Patent 5,833,891; Patent applied for February 27, 1997; Patent granted November 10, 1998
7. V. Stella, R. A. Rajewski and J. W. McGinity; Sulfoalkyl ether cyclodextrin based solid pharmaceutical formulations and their use, U.S. Patent 5,874,418; Patent applied for May 5, 1997; Patent granted February 23, 1999
8. B. Subramaniam, R. A. Rajewski and D. J. Bochniak; Process and apparatus for size selective separation of micro- and nano-particles, U.S. Patent applied for November 17, 1998
9. V. J. Stella, R. A. Rajewski, V. M. Rao, J. W. McGinity and G. L. Mosher; Sulfoalkyl ether cyclodextrin based controlled release solid pharmaceutical formulations, U.S. Patent applied for January 13, 1999

**Publications**

1. R.J. Tait, D.J. Skanchy, D.O. Thompson, N.C. Chetwyn, D.A. Dunshee, R.A. Rajewski, V.J. Stella and J.F. Stobaugh; Characterization of sulphoalkyl ether derivatives of  $\beta$ -cyclodextrin by capillary electrophoresis with indirect UV detection, *J. Pharm. Biomed. Anal.*, Vol. 10, No. 9, pp. 615-622 (1992).
  2. R.A. Rajewski, D.G. Kosednar, T.A. Matches, O.S. Wong, K. Burchett and K. Thakker, Stereo-specific analysis of a novel protein-kinase C inhibitor, *J. Pharm. Biomed. Anal.*, Vol. 13, No. 3, pp. 247-253 (1995).
  3. R.A. Rajewski, G. Traiger, J. Bresnahan, P. Jaberaboansari, V.J. Stella and D.O. Thompson; Preliminary safety evaluation of parenterally administered sulfoalkyl ether cyclodextrin derivatives, *J. Pharm. Sci.*, Vol. 84, No. 8, pp. 927-932 (1995).
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**Publications continued**

4. K. Okimoto, R.A. Rajewski, K. Uekama and V.J. Stella; The interaction of charged and uncharged drugs with neutral (HP- $\beta$ -CD) and anionically charged (SBE7- $\beta$ -CD)  $\beta$ -cyclodextrins, *Pharm. Res.*, Vol. 13, No. 2, pp. 256-264 (1996).
5. E.A. Luna, E.R.N. Bornancini, R.J. Tait, D.O. Thompson, J.F. Stobaugh, R.A. Rajewski and V.J. Stella, Evaluation of the utility of capillary electrophoresis (CE) for the analysis of modified cyclodextrin mixtures, *J. Pharm. Biomed. Anal.*, Vol 15, No. 1, pp. 63-71 (1996).
6. R.A. Rajewski and V.J. Stella, Pharmaceutical Applications of Cyclodextrins. II. *In vivo* drug delivery, *J. Pharm. Sci.*, Vol. 85, No. 11, pp. 1142-1169 (1996).
7. V. Zia, R.A. Rajewski, E.R. Bornancini, E.A. Luna and V.J. Stella, Effect of alkyl chain length and degree of substitution on the complexation of sulfoalkyl ether  $\beta$ -cyclodextrins with steroids, *J. Pharm. Sci.*, Vol. 86, No. 2, pp. 220-224 (1997).
8. S. Ghate, R.A. Rajewski, D.O. Thompson and V.J. Stella, Effect of Osmolality and Erythrocyte Species on Cyclodextrin Induced Hemolysis, to be submitted, *Int. J. Pharm.*.
9. E.A. Luna, D. Vander Velde, R.J. Tait, D.O. Thompson, R.A. Rajewski and V.J. Stella, Isolation and characterization by NMR spectroscopy of three monosubstituted 4-sulfobutyl ether derivatives of cyclomaltoheptaose ( $\beta$ -cyclodextrin), *Carbohydr. Res.*, Vol. 299, pp.111-118 (1997).
10. E.A. Luna, E.R. N. Bornancini, D.O. Thompson, R.A. Rajewski and V.J. Stella, Fractionation and characterization of 4-sulfobutyl ether derivatives of cyclomaltoheptaose ( $\beta$ -cyclodextrin), *Carbohydr. Res.*, Vol. 299, pp. 103-110 (1997).
11. V.J. Stella and R.A. Rajewski, Cyclodextrins: Their future in drug formulation and delivery, *Pharm. Res.*, Vol. 14, pp. 556-567 (1997).
12. V. Zia, E.R. Bornancini, E.A. Luna, R.A. Rajewski and V.J. Stella, Effect of alkyl chain length and degree of substitution on complexation of sulfoalkyl  $\beta$ -cyclodextrins with testosterone and progesterone, In J. Szejtli and L. Szenté (eds.) *Proceedings of the Eighth International Symposium on Cyclodextrins*, pp. 259-262; 1996 Kluwer Academic Publishers, Netherlands.
13. E.A. Luna, E.R. Bornancini, D.O. Thompson, R.A. Rajewski and V.J. Stella, Characterization of sulfobutyl ether  $\beta$ -cyclodextrin mixtures, In J. Szejtli and L. Szenté (eds.) *Proceedings of the Eighth International Symposium on Cyclodextrins*, 133-136; 1996 Kluwer Academic Publishers, Netherlands.
14. B. Subramaniam, R.A. Rajewski and W.K. Snavely, Pharmaceutical processing with supercritical carbon dioxide, *J. Pharm. Sci.*, Vol. 86, pp. 885-890 (1997).
15. J. L. Haslam, K. L. Egodage, W. Chen, R. A. Rajewski and V. J. Stella, Stability of Rifabutin in an extemporaneously compounded oral liquid, accepted for publication *Amer. J. Health-System Pharm.*, Vol. 56, pp. 333-336 (1999).

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**Publications continued**

16. K. Okimoto, M. Miyake, M. Yasumura, N. Ohnishi, R. A. Rajewski, V. J. Stella, T. Irie and K. Uekama, Design and evaluation of an osmotic pump tablet (OPT) for prednisolone, a poorly water soluble drug using (SBE)<sub>7M</sub>- $\beta$ -CD, *Pharm. Res.* Vol. 15, No. 10, pp.1562-1568 (1998).
17. K. Okimoto, R. A. Rajewski, and V. J. Stella, Release of testosterone from an osmotic pump tablet utilizing (SBE)<sub>7M</sub>- $\beta$ -CD as both a solubilizing and osmotic agent., *J. Control. Rel.* Vol. 58, pp. 29-38 (1999).
18. K. Okimoto, A. Ohike, R. Ibuki, O. Aoki, N. Ohnishi, T. Irie, K. Uekama, R. A. Rajewski, and V. J. Stella, Design and Evaluation of an Osmotic Pump Tablet (OPT) for Chlorpromazine using (SBE)<sub>7M</sub>- $\beta$ -CD, *Pharm. Res.* Vol. 16, pp. 549-554 (1999).
19. D. Q. Ma, R. A. Rajewski, and V. J. Stella, Thermal Properties and Processing of (SBE)<sub>7M</sub>- $\beta$ -CD as a Freeze-Drying Excipient in Pharmaceutical Formulations, *STP Pharma Sci.* in press.
20. K. Okimoto, A. Ohike, R. Ibuki, O. Aoki, N. Ohnishi, R. A. Rajewski, V. J. Stella T. Irie, and K. Uekama, Factors Affecting Membrane Controlled Drug Release for an Osmotic Pump Tablet (OPT) Utilizing (SBE)<sub>7M</sub>- $\beta$ -CD as Both a Solubilizer and Osmotic Agents, *J. Cont. Rel.* in press.
21. V. J. Stella, K. Uekama, T. Irie, V. M. Rao, E. A. Zannou, R. A. Rajewski, S. Shiraishi, and K. Okimoto, The Use of (SBE)<sub>7M</sub>- $\beta$ -CD (Captisol®) as a Solubilizing and Osmotic Agent for Controlled and Complete Oral Delivery of Poorly Waters Soluble Drugs, *Proceedings of the 9th International Symposium on Cyclodextrins*, Santiago de Compostela, Spain, in press.
22. K. Okimoto, M. Miyake, O. Aoki, N. Ohnishi, T. Irie, K. Uekama, R. A. Rajewski, and V. J. Stella, Design and Evaluation of a Porosity Controlled Osmotic Pump Tablet for Chlorpromazine using (SBE)<sub>7M</sub>- $\beta$ -CD, *Proceedings of the 9th International Symposium on Cyclodextrins*, Santiago de Compostela, Spain, in press.
23. D. Q. Ma, R. A. Rajewski, and V. J. Stella, New Injectable Melphalan Formulations Utilizing (SBE)<sub>7M</sub>- $\beta$ -CD and HP- $\beta$ -CD, *Int. J. Pharm.* submitted.
24. D. Q. Ma, R. A. Rajewski, D. Vander Velde and V. J. Stella, Comparison Between (SBE)<sub>7M</sub>- $\beta$ -CD and HP- $\beta$ -CD in the Stabilization of Two Anti-neoplastic Agents Melphalan and Carmustine, *J. Pharm. Sci.* submitted.
25. K. Okimoto, A. Ohike, R. Ibuki, T. Irie, K. Uekama, R. A. Rajewski, and V. J. Stella, General Applicability of (SBE)<sub>7M</sub>- $\beta$ -CD in Contolled-Porosity Osmotic Pump Tablets (OPT), *J. Cont. Rel.* submitted.
26. B. Subramaniam, S. Siam, R. Rajewski and V. J. Stella, Green Process Concepts for the Pharmaceutical Industry, *ACS book on Green Chemistry and Processing*, submitted.

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**Abstracts**

1. R.A. Rajewski, V.J. Stella and J.F. Stobaugh, Determination of plasma progesterone by HPLC-fluorescence detection of the bisdansyl hydrazone derivative, AAPS 2nd Annual Meeting, Boston, MA 1987
2. C. Charloux, K. Patel and R.A. Rajewski, Chemical interactions of 5-hydroxymethyl furfuraldehyde and nucleophilic groups of biologicals, AAPS 6th Annual Meeting, Washington, D.C., 1991
3. P.J. Smialkowski, L.T. Olszewski, R.A. Rajewski and J.M. Baldoni, Determination of the degradation kinetics of a recombinant malaria vaccine by accelerated stability testing, AAPS 6th Annual Meeting, Washington, D.C., 1991
4. R.A. Rajewski, V.J. Stella, G. Traiger, D.O. Thompson and J. Bresnahan, Toxicology and histopathology of sulfoalkyl ether cyclodextrin derivatives, 6th International Cyclodextrin Conference, Chicago, IL, 1992
5. R.A. Rajewski, V.J. Stella, D. Dunshee, R. Tait and D.O. Thompson, Synthesis and characterization of sulfoalkyl ether cyclodextrin derivatives, 6th International Cyclodextrin Conference, Chicago, IL, 1992
6. R.A. Rajewski, V.J. Stella, M. Tam and W. Waugh, The phase-solubility behavior of sulfoalkyl ether cyclodextrin derivatives, 6th International Cyclodextrin Conference, Chicago, IL, 1992
7. R.A. Rajewski, V.J. Stella, M. Tam, W. Waugh and D.O. Thompson, Pharmaceutically useful anionic cyclodextrin derivatives, AAPS 7th Annual Meeting, San Antonio, TX, 1992
8. B. Davis, R.A. Rajewski, S. Narayanan, P. Eckert, S. Harrison, O. Wong and H. Bozigian, Development and validation of an HPLC method for the quantitation of SPC-103600 in dog plasma, Fourth International Workshop on Bioanalysis, Lawrence, KS, 1994
9. B. Davis, R.A. Rajewski, S. Narayanan, P. Eckert, S. Harrison, O. Wong and H. Bozigian, Development and validation of an HPLC method for the quantitation of SPC-103600 in dog plasma, AAPS 9th Annual Meeting, San Diego, CA, 1994
10. E.A. Luna, D. Vander Velde, R.J. Tait, D.O. Thompson, V.J. Stella and R.A. Rajewski, Isolation and magnetic resonance characterization of monosubstituted sulfobutyl ether  $\beta$ -cyclodextrins, AAPS 10th Annual Meeting, Miami Beach, FL, 1995
11. E.A. Luna, E.R.N. Bornancini, D.O. Thompson, R.A. Rajewski and V.J. Stella, Fractionation and characterization of a mixture of sulfobutyl ether  $\beta$ -cyclodextrins, AAPS 10th Annual Meeting, Miami Beach, FL, 1995
12. V. Zia, E.R.N. Bornancini, E.A. Luna, R.A. Rajewski and V.J. Stella, Sulfoalkyl ether  $\beta$ -cyclodextrins: Effect of alkyl chain length and degree of substitution on complexation, AAPS 10th Annual Meeting, Miami Beach, FL, 1995

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**Abstracts continued**

13. K. Okimoto, R.A. Rajewski and V.J. Stella, The interaction of charged and uncharged drugs with neutral (HP- $\beta$ -CD) and anionically charged (SBE7- $\beta$ -CD)  $\beta$ -cyclodextrins, AAPS 10th Annual Meeting, Miami Beach, FL, 1995
14. V. Zia, E. R. Bornancini, E. A. Luna, R. A. Rajewski, and V. J. Stella, Effect of alkyl chain length and degree of substitution on complexation of sulfoalkyl  $\beta$ -cyclodextrins with testosterone and progesterone, 8th Int. Cyclodextrin Symp., Budapest, Hungary, 1996.
15. E. A. Luna, E. R. Bornancini, D. O. Thompson, R. A. Rajewski, and V. J. Stella, Characterization of sulfobutyl ether  $\beta$ -cyclodextrin mixtures, 8th Int. Cyclodextrin Symp., Budapest, Hungary, 1996.
16. S. Saim, B. Subramaniam, R.A. Rajewski and V.J. Stella, Particle micronization with compressed gas antisolvents, AAPS 11th Annual Meeting, Seattle, WA, 1996
17. E.A. Luna, R.M. Trewyn, E.R. Bornancini, D.O. Thompson, R.A. Rajewski and V.J. Stella, An HPLC method for the analysis of sulfobutylether  $\beta$ -cyclodextrins, AAPS 11th Annual Meeting, Seattle, WA, 1996
18. D.Q. Ma, R.A. Rajewski and V.J. Stella, Evaluation of a sulfbutylether  $\beta$ -cyclodextrin as a solubilizing/stabilizing agent for melphalan, AAPS 11th Annual Meeting, Seattle, WA, 1996
19. D.G. Kosednar, D.R. Hurt, R.A. Rajewski, K.L. Amsberry and P.E. Kennedy, Parenteral formulation development of the antisense oligonucleotide Trecovirsen sodium (GEM 91), Anitsense 97, Cambridge, MA, 1997
20. D. Ma, R.A. Rajewski and V.J. Stella, Melphalan stability: A comparison between (SBE)<sub>7</sub>- $\beta$ -CD and HP- $\beta$ -CD for melphalan, International Conference on "Pharmaceutical Applications of Cyclodextrins", Lawrence, KS, June 29-July 2, 1997
21. V. Zia, R.A. Rajewski and V.J. Stella, Characterization of binding forces involved in complexation of sulfobutyl ether- and hydroxypropyl- $\beta$ -cyclodextrins with various pharmaceutical agents, International Conference on "Pharmaceutical Applications of Cyclodextrins", Lawrence, KS, June 29-July 2, 1997
22. K. Okimoto, M. Miyake, M. Yasumura, N. Ohnishi, R. A. Rajewski, V. J. Stella, T. Irie and K. Uekama, Development of a novel osmotic pump tablet for prednisolone applying a sulfobutyl ether  $\beta$ -cyclodextrin., International Conference on "Pharmaceutical Applications of Cyclodextrins", Lawrence, KS, June 29-July 2, 1997
23. V. M. Rao, E. A. Zannou, S. Narisawa, J. L. Haslam, R. A. Rajewski and V. J. Stella, Utilization of modified cyclodextrins in the formulation of delayed-release tablets: An approach to obtain complete delivery of poorly soluble weak bases., International Conference on "Pharmaceutical Applications of Cyclodextrins", Lawrence, KS, June 29-July 2, 1997
24. E. A. Zannou, V. M. Rao, S. Narisawa, J. L. Haslam, R. A. Rajewski and V. J. Stella, Sustained release of methylprednisolone from novel osmotic pump tablets containing

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**Abstracts continued**

sulfobutyl ether derivatives of cyclodextrins, International Conference on "Pharmaceutical Applications of Cyclodextrins", Lawrence, KS, June 29-July 2, 1997

25. V. Zia, R. A. Rajewski and V. J. Stella, SBE- $\beta$ -CDs and HP- $\beta$ -CDs: Characterization of binding forces involved in complexation, AAPS 12th National Meeting, Boston, MA, November 2-6, 1997
26. K. L. Egodage, J. S. Haslam, R. A. Rajewski and V. J. Stella, Correlation and validation to the USP bioassay for nystatin, AAPS 12th National Meeting, Boston, MA, November 2-6, 1997.
27. K. L. Egodage, J. S. Haslam, R. A. Rajewski and V. J. Stella, Evaluation of a new sustained release intraoral pediatric nystatin formulation, AAPS 12th National Meeting, Boston, MA, November 2-6, 1997
28. V. M. Rao, E. A. Zannou, S. Narisawa, J. L. Haslam, R. A. Rajewski and V. J. Stella, Application of (SBE)<sub>7M</sub>- $\beta$ -CD in the preparation of delayed-release tablets for complete delivery of poorly soluble basic drugs, AAPS 12th National Meeting, Boston, MA, November 2-6, 1997
29. E. A. Zannou, V. M. Rao, S. Narisawa, J. L. Haslam, R. A. Rajewski and V. J. Stella, Use of sulfobutyl ether derivatives of cyclodextrins in novel controlled porosity osmotic pump tablet for methylprednisolone sustained release, AAPS 12th National Meeting, Boston, MA, November 2-6, 1997
30. K.L. Amsberry, D.G. Kosednar, R.A. Rajewski and P.E. Kennedy, Solution state degradation of an antisense oligonucleotide Trevcovirsen Sodium, AAPS 12th National Meeting, Boston, MA, November 2-6, 1997
31. V. Stella, K. Uekama, T. Irie, V.M. Rao, E.A. Zannou, R.A. Rajewski, S. Shiraishi and K. Okimoto, The use of (SBE)<sub>7M</sub>- $\beta$ -CD (Captisol™) as a solubilizing and osmotic agent for controlled and complete oral delivery of poorly water soluble drugs. 9th Int. Cyclodextrin Symp., San Deigo Compostella, Spain, June 1998.
32. K. Okimoto, M. Miyake, O. Aoki, N. Ohnishi, T. Irie, K. Uekama, R.A. Rajewski and V.J. Stella, Design and evaluation of a porosity-controlled osmotic pump tablet for chlorpormazine using (SBE)<sub>7M</sub>- $\beta$ -CD, 9th Int. Cyclodextrin Symp., San Deigo Compostella, Spain, June 1998.
33. B.Subramaniam, F. Niu, S. Saim, R.A. Rajewski and J. Haslam, Continuous particle coating using carbon dioxide as an antisolvent, AIChE meeting, St. Louis, MO.
34. K. L. Egodage, J. L. Haslam, R. A. Rajewski and V. J. Stella, Evaluation of Latex Condom Integrity after Exposure to Intravaginal Formulations Containing Mineral Oil, AAPS 13th National Meeting, San Francisco, CA, November 15-19, 1998.
35. D. Q. Ma, R. A. Rajewski, D. Vander Velde and V. J. Stella, A Comparative Study on Stabilizing Potentials Between (SBE)<sub>7M</sub>- $\beta$ -CD and HP- $\beta$ -CD Using the Model Compound Melfhalan, AAPS 13th National Meeting, San Francisco, CA, November 15-19, 1998.

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**Abstracts continued**

36. K. L. Egodage, J. L. Haslam, R. A. Rajewski and V. J. Stella, Evaluation of KY Jelly as an Intravaginal Sustained Release Platform Using AZT and 3TC as Model Compounds, AAPS 13th National Meeting, San Francisco, CA, November 15-19, 1998.
37. F. Niu, S. Siam, B. Subramaniam, R. Rajewski and J. Haslam, Continuous Particle Coating Using Carbon Dioxide as an Antisolvent, AIChE Annual Meeting, Miami Beach, FL, November 1998
38. B. Subramaniam, R. A. Rajewski, F. Niu, D. J. Bochniak and J. Haslam, Micronization and Coating Applications with Supercritical Carbon Dioxide, , AAPS 13th National Meeting, San Francisco, CA, November 15-19, 1998.

**Presentations**

1. Mac Multi; Non-linear curve fitting for the Macintosh™ computer. The Department of Pharmaceutical Chemistry, The University of Kansas, Lawrence, KS; October 1986
2. Pharmaceutical uses of cyclodextrins. The Department of Pharmaceutical Chemistry, The University of Kansas, Lawrence, KS; March 1987
3. Evaluation of the usefulness and parenteral safety of modified cyclodextrins. Department of Pharmacy Research, Merrell Dow Pharmaceuticals, Inc., Cincinnati,
4. Evaluation of the usefulness and parenteral safety of modified cyclodextrins. Department of Pharmaceutical Sciences, Smith Kline & French Laboratories, King of Prussia, PA; April 1989
5. Evaluation of the usefulness and parenteral safety of modified cyclodextrins. Department of Formulations Research, Lederle Laboratories/American Cyanamid, Pearl River, NY; April 1989
6. Evaluation of the usefulness and parenteral safety of modified cyclodextrins. Department of Pharmaceutical Research, Bristol-Myers Company, Syracuse, NY; April 1989
7. Evaluation of the usefulness and parenteral safety of modified cyclodextrins. The Department of Pharmaceutical Chemistry, The University of Kansas, Lawrence, KS; April 1989
8. Evaluation of the usefulness and parenteral safety of modified cyclodextrins. Department of Pharmaceutical Sciences, Marion Laboratories, Kansas City, MO; May 1989

**Grants and Contracts**

1. Feasibility Studies with SBE Cyclodextrins; CyDex, L.C.; Principal Investigator
  2. Synthesis of SBE4- $\beta$ -CD; CyDex, L.C.; Principal Investigator
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**Grants and Contracts continued**

3. Literature Research on Cyclodextrins; CyDex. L.C.; Principal Investigator
4. Formulation Development and Manufacture of Pharmaceutical Dosage Forms for Treatment of Infectious Diseases (Part A); National Institutes of Health; Co-Principal Investigator
5. Preformulation Studies on HYBRIDON Supplied Oligonucleotides; Hybridon, Inc.; Principal Investigator
6. Evaluation of Glucose Oxidase Release from Hydrogels; Cygnus Therapeutic Systems; Principal Investigator
7. Stability of Busulfan Injection; Orphan Medical, Inc.; Principal Investigator
8. Preformulation Studies on AMG474-00; Amgen, Inc.; Principal Investigator

**Referee**

1. Pharmaceutical Research
2. Journal of Pharmaceutical Sciences
3. Journal of Pharmaceutical and Biomedical Analysis
4. Journal of the American Chemical Society

**University Committee Service**

Higuchi Biosciences Center Local Area Network committee  
Higuchi Biosciences Center LAN Administrator search committee  
University of Kansas Safety Committee